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## Sustainability assessment in higher education: first application and evaluation of AISHE 2.0 in Belgium

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### Abstract

The integration of sustainable development in higher education has led to different focus points in education, research, outreach and campus operations. Sustainability assessment has become an important aspect, as can be derived from numerous international declarations on higher education for sustainable development. A variety of sustainability assessment tools and instruments have been developed, specifically focusing on higher education institutions (HEIs). Each instrument has its own scope (e.g. education, curriculum, campus operations), methods (e.g. focus groups, desk research), emphasis (e.g. ecological, social, economic), and results (e.g. qualitative, quantitative). One of these tools is the Assessment Instrument for Sustainability in Higher Education (AISHE), developed in 2001. The first version of AISHE has been used in a number of universities worldwide, leading to reports about the strengths and weaknesses of the instrument. The critical recommendations have led to the development of a new version of the AISHE instrument, AISHE 2.0. This new version is a modular tool, including policy aspects, research, societal role and campus operations. In this paper, we present the results of the first application of AISHE 2.0 in Belgium. The tool has been used in the Department of Management & Technology of University Colleges Leuven-Limburg. This HEI has a wide experience in the topic of sustainability assessment, with eleven audits based on the first version of AISHE between 2003 and 2010, one assessment of campus operations using the Ecological Footprint Analysis (2012) and several assessments based on AISHE 2.0 in 2015. This paper describes the outcomes of the AISHE 2.0 assessments and compares them with outcomes of previous assessments. Furthermore, this paper offers recommendations for the use of the instrument in

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other HEIs. It also contributes to the body of knowledge on the development and application of sustainability assessment tools, as the application of, and reporting about, are lagging behind.

## **Keywords**

AISHE 2.0; higher education; organisational change; sustainability assessment; sustainability integration process

## **Introduction**

The integration of sustainable development (SD) in higher education has led to different focus points and initiatives in education, research, outreach and campus operations. Sustainability assessment has become an important aspect, as can be derived from numerous international declarations on higher education for sustainable development (Lozano et al., 2013). A variety of sustainability assessment tools and instruments have been developed, specifically focusing on higher education institutions (HEIs). Each instrument has its own scope (e.g. education, curriculum, campus operations), methods (e.g. focus groups, desk research), emphasis (e.g. ecological, social, economic), and results (e.g. qualitative, quantitative) (Ramos and Moreno Pires; 2013, Shriberg, 2004).

One of these tools is the Assessment Instrument for Sustainability in Higher Education (AISHE), developed in 2001 by the Dutch Committee for Sustainability in Higher Education (Roorda, 2001). This instrument is based on a general method by the European Foundation for Quality Management (EFQM) and has been recognised as a standard for (self-) evaluation and accreditation by the Dutch-Flemish Accreditation Organisation. The first version of AISHE has been used in a number of universities worldwide (e.g. Brandli et al., 2014), leading to reports about the strengths and weaknesses of the instrument. Major strengths were the process-oriented approach, the possibilities to raise awareness among participants, and the fact that it connects bottom-up approaches to top-down initiatives. One of the criticisms was that the instrument only focused on educational aspects, leaving the research, outreach and campus operations aspects underexposed. Another criticism focused on the results of an AISHE report, which only comprises qualitative criteria (Lambrechts and Ceulemans, 2013). The critical recommendations have led to the development of a new version of the AISHE instrument, AISHE 2.0 (Roorda et al., 2009). This new version is a modular tool, including policy aspects, research, societal role (outreach) and campus operations.

In this paper, we present the results of the first application of AISHE 2.0 in Belgium. The tool has been used in the Department of Management & Technology of University Colleges Leuven-Limburg (UCLL). This HEI has a wide experience in the topic of sustainability assessment, with eleven audits based on the first version of AISHE between 2003 and 2010 (including four consecutive audits in the Department of Management & Technology), one assessment of campus operations using the Ecological Footprint Analysis (2012) and several assessments based on AISHE 2.0 in 2015. All study programs in Office (Management) and Business Management have been assessed for each of the five modules of AISHE 2.0. This paper describes the outcomes of the assessment and compares them with outcomes of previous assessments based on the first version of AISHE within this same department (as described by Lambrechts and Ceulemans, 2013; Lambrechts, 2015; Verhulst and Lambrechts, 2015). Furthermore, this paper offers a validation of AISHE 2.0, leading to recommendations for the use of the instrument in other HEIs. It also contributes to the body of knowledge on the development and

application of sustainability assessment tools, as the application of, and reporting about, are lagging behind (Ceulemans et al., 2015; Lozano et al., 2015, in press; Ramos and Moreno Pires, 2013).

## Method

AISHE 2.0 has been developed by an international group of higher education professionals from The Netherlands, Sweden, Austria and Spain. The aim of the instrument is to provide a general assessment of all key roles of a HEI, whereas the first version of the instrument mainly focused on education, with a few criteria also looking at policy and the professional development of teachers. As with the first version of AISHE, the new version is based on an EFQM quality management approach. Each criterion in the instrument is assessed and rated in a qualitative way. A quantitative dimension has been added, in which each criterion is placed on a scale between 0 (no integration of SD) and 5 (full, systemic and society-oriented SD integration). Table 1 provides an overview of each of the five stages of AISHE 2.0 (Roorda et al., 2009). The criteria of AISHE 2.0 are then discussed and assessed by a group of maximum 15 participants, in which teachers, students, administrative staff and policy members are represented. Depending on the module (e.g. societal role), external stakeholders might also be invited to participate. Participants have to reach a consensus about the current situation of SD integration in the study program, and are also encouraged to express a desired situation to be accomplished within a certain timeframe (e.g. one year).

**Table 1. The five stages of AISHE 2.0 (based on Roorda et al., 2009)**

<b>Stage 1:</b>	<b>Stage 2:</b>	<b>Stage 3:</b>	<b>Stage 4:</b>	<b>Stage 5:</b>
<b>Activity oriented</b>	<b>Process oriented</b>	<b>System oriented</b>	<b>Chain oriented</b>	<b>Society oriented</b>
<ul style="list-style-type: none"> <li>- Goals are subject-oriented.</li> <li>- The processes are based on actions of individual members of staff.</li> <li>- Decisions are usually made ad hoc.</li> </ul>	<ul style="list-style-type: none"> <li>- Goals are related to processes.</li> <li>- Decisions are made by groups of professionals and supported by the management.</li> </ul>	<ul style="list-style-type: none"> <li>- The goals are stakeholder-oriented instead of internally oriented.</li> <li>- There is an organisation policy related to (middle)long-term goals.</li> <li>- Goals are formulated explicitly, and they are measured and evaluated. There is feedback from the results.</li> </ul>	<ul style="list-style-type: none"> <li>- The internal processes are seen as part of a chain.</li> <li>- There is a permanent network of contacts with direct stakeholders.</li> <li>- The activities and processes are based on formulated external goals.</li> </ul>	<ul style="list-style-type: none"> <li>- There is a long-term strategy. The policy is aiming at constant improvement.</li> <li>- Contacts are maintained, not only with direct stakeholders but also with other stakeholders, all over society.</li> <li>- The organisation fulfils a prominent role in society.</li> </ul>

Within University Colleges Leuven-Limburg, all study programmes of the Department of Management & Technology were assessed in 2015. Table 2 provides an overview of the planning of the assessment of the different modules. It shows that it is necessary to provide considerable attention to the planning of the modules, as it is not possible to finish an assessment of all modules in one day.

The assessments in University Colleges Leuven-Limburg were organised within the framework of an implementation project 'ECHO for a Sustainable Future – Transition towards Sustainable Higher Education', funded by the National Lottery of Belgium. The objective of the assessments was threefold: (1) to assess the current situation of SD integration in the organisation, compared to the previous assessments in 2003, 2004, 2009 and 2010; (2) to provide information to develop an organisational change trajectory for SD; (3) to evaluate the practical use of the new AISHE instrument within the organisation.

**Table 2. Planning of the assessments**

#	Date	Study program	AISHE Module
1	22 May 2015	Office Management	Identity
2	22 May 2015	Office Management	Education
3	2 June 2015	Office Management Business Management	Campus operations
4	2 June 2015	Office Management Business Management	Research
5	2 June 2015	Office Management Business Management	Society
6	3 June 2015	Business Management	Identity
7	3 June 2015	Business Management	Education

## Results

### *Results regarding the current integration of SD*

The results of the assessments are presented in the figures 1 to 7. They provide the current situation (blue line) and desired situation (red line) for each criterion per module. A general trend in the results is that criteria are mostly assessed in stage 2 (process-oriented) and stage 3 (system-oriented). An exception is the module 'research', which has been assessed in a very critical way, resulting in overall scores of stage 1 (activity-oriented), as depicted in figure 4. A possible explanation for this result is that the researchers participating in the assessment were very critical towards the current situation, and did not take into account various existing initiatives. Also, they were not familiar with

sustainability criteria for research and therefore did not apply them during the assessment. Another interesting outcome is the difference in the results of the modules ‘Identity’ and ‘Education’ in Office Management and in Business Management. Although both study programs are based on the same vision, policy, leadership initiatives, communication initiatives etc., the participants of Business Management seemed to assess the current situation in a more critical way. Figure 8 shows the differences in Office management (OM, green line) and Business Management (BM, orange line).

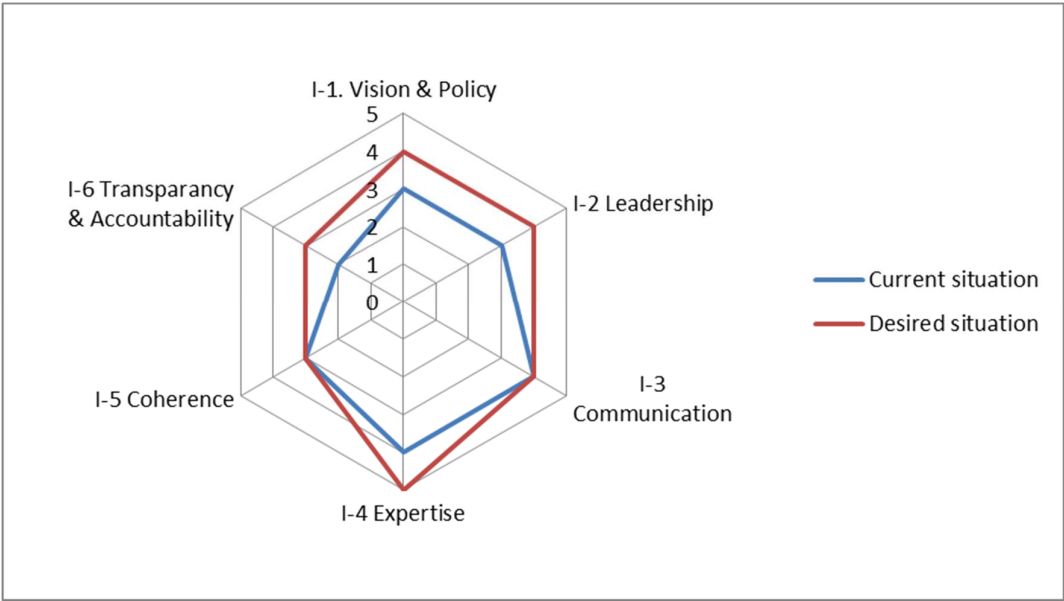


Figure 1. Results of the assessment of the ‘Identity’ module in Office Management (#1)

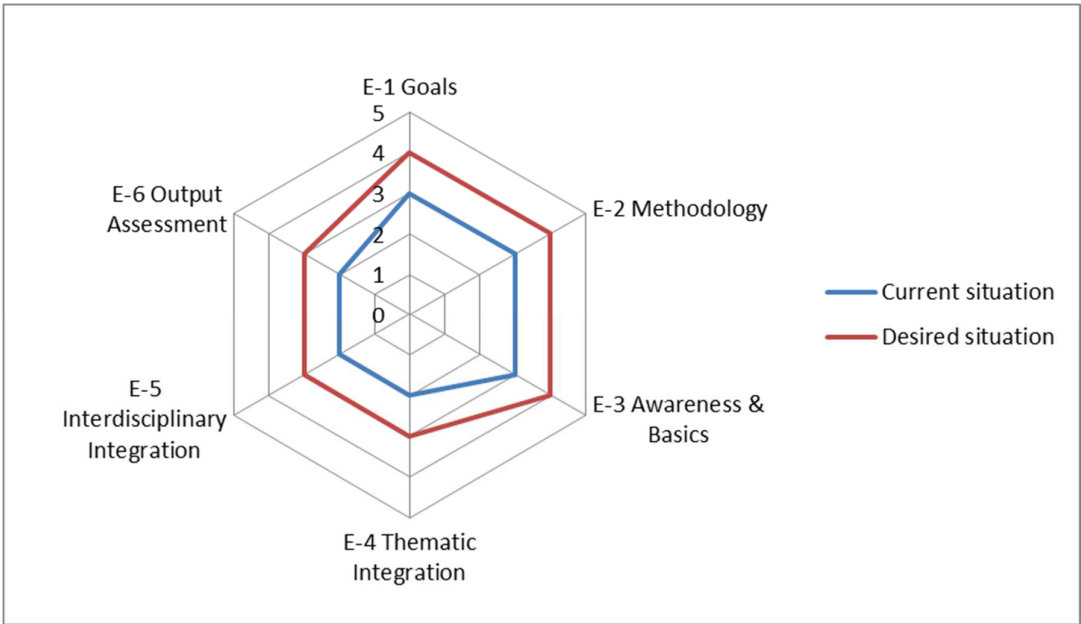


Figure 2. Results of the assessment of the ‘Education’ module in Office Management (#2)

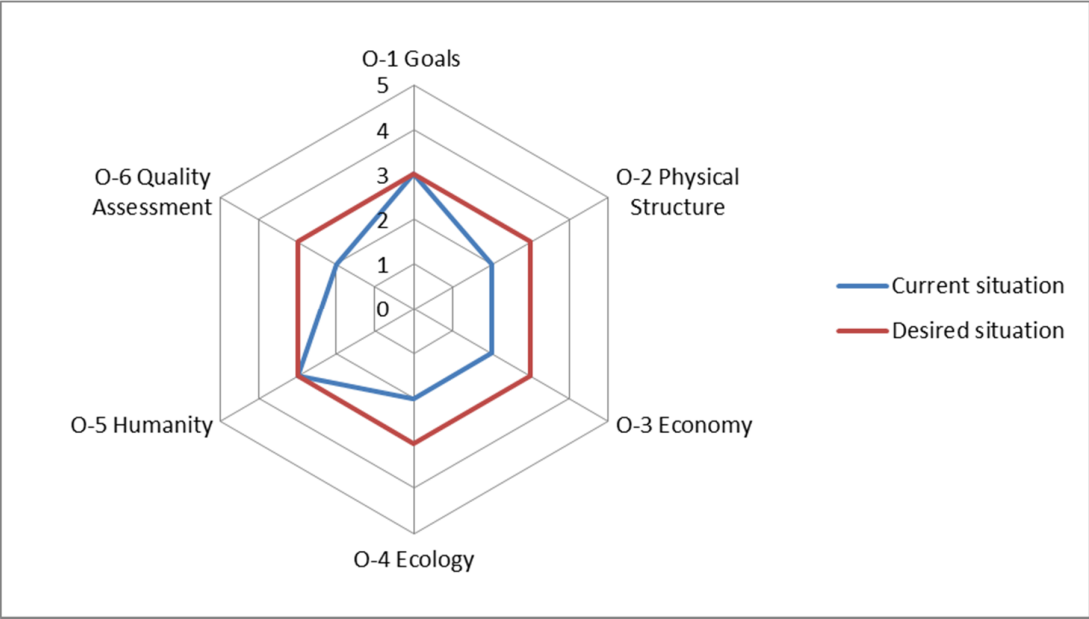


Figure 3. Results of the assessment of the 'Operations' module (#3)

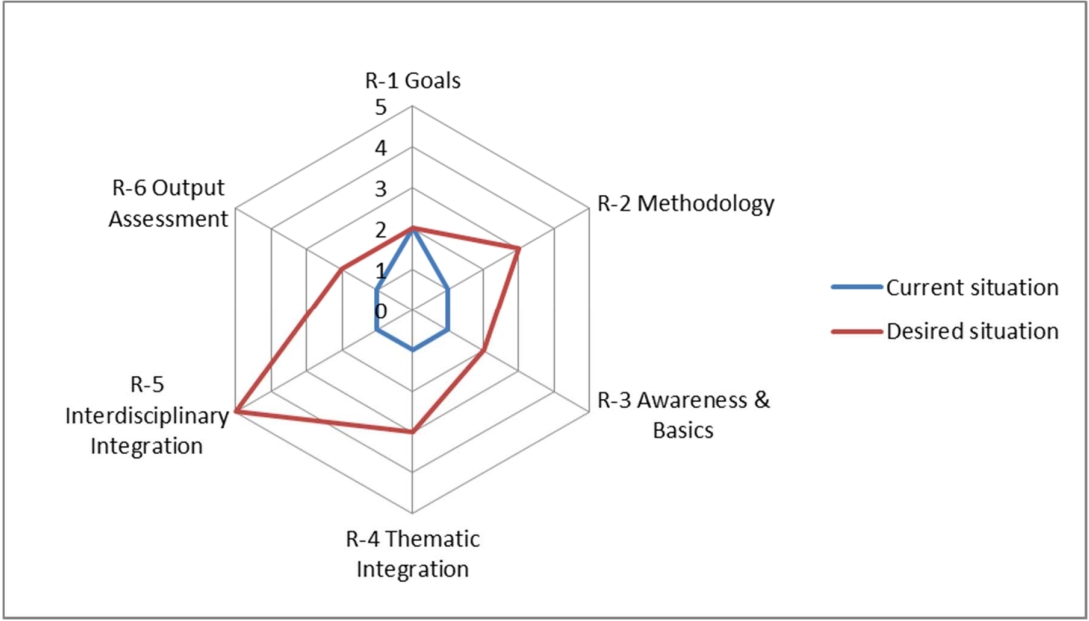


Figure 4. Results of the assessment of the 'Research' module (#4)

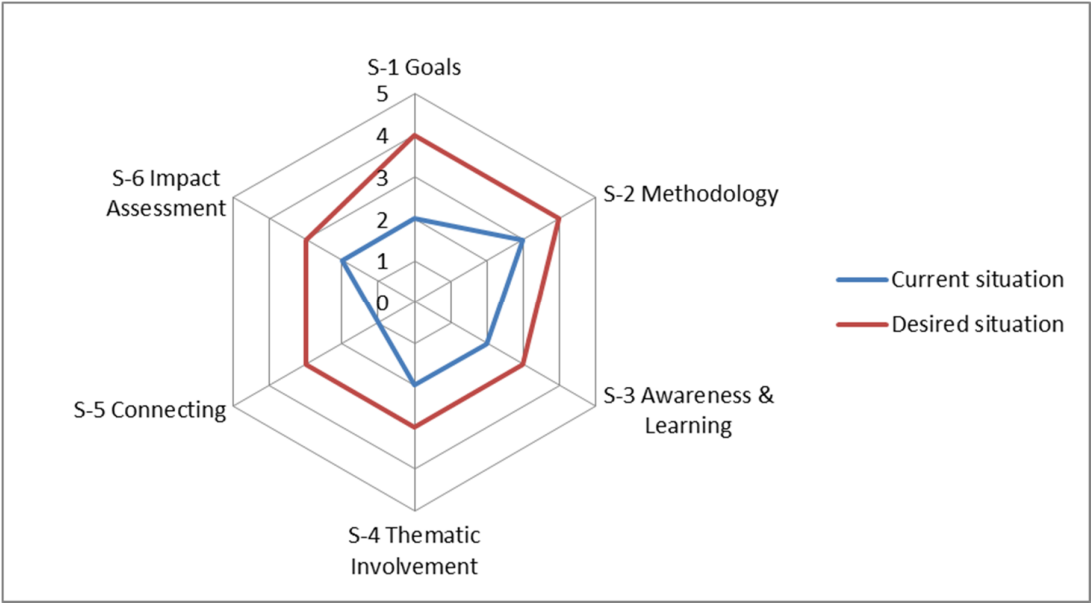


Figure 5. Results of the assessment of the 'Society' module (#5)

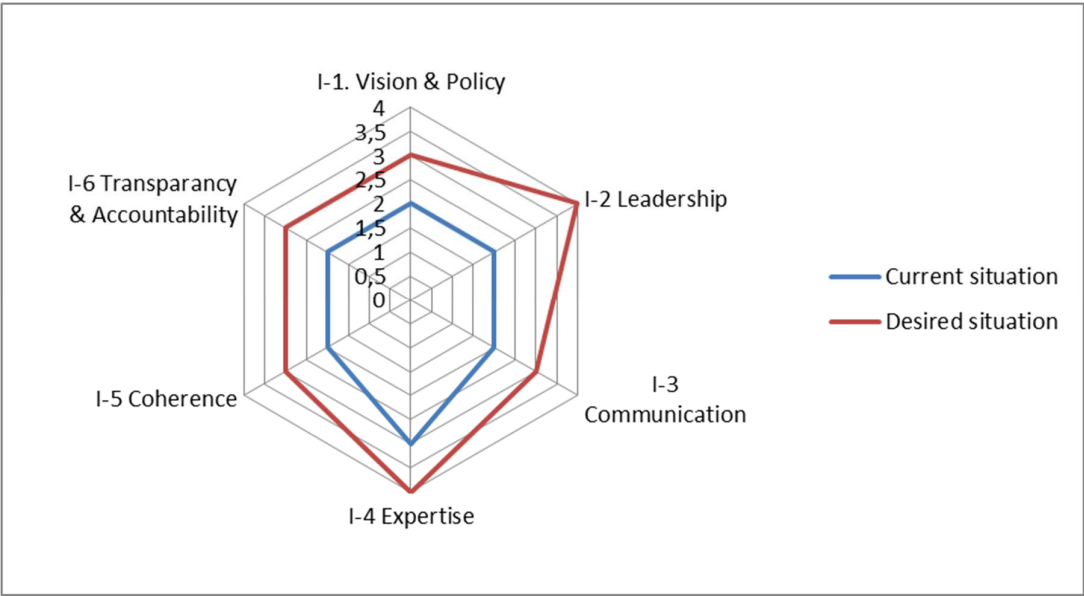


Figure 6. Results of the assessment of the 'Identity' module in Business Management (#6)

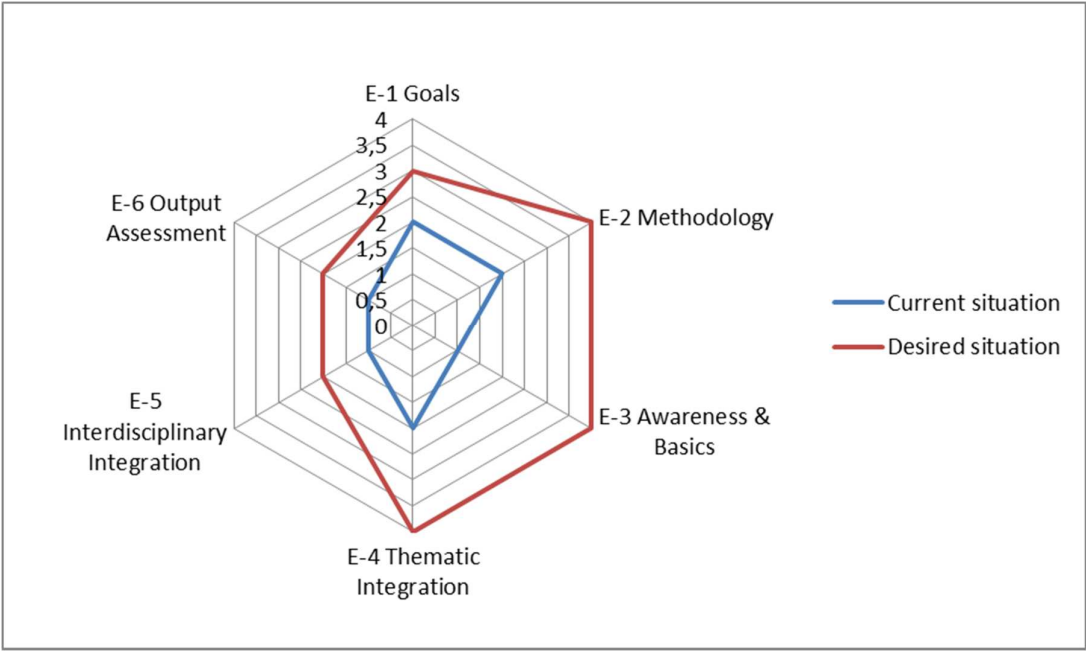


Figure 7. Results of the assessment of the 'Education' module in Business Management (#7)

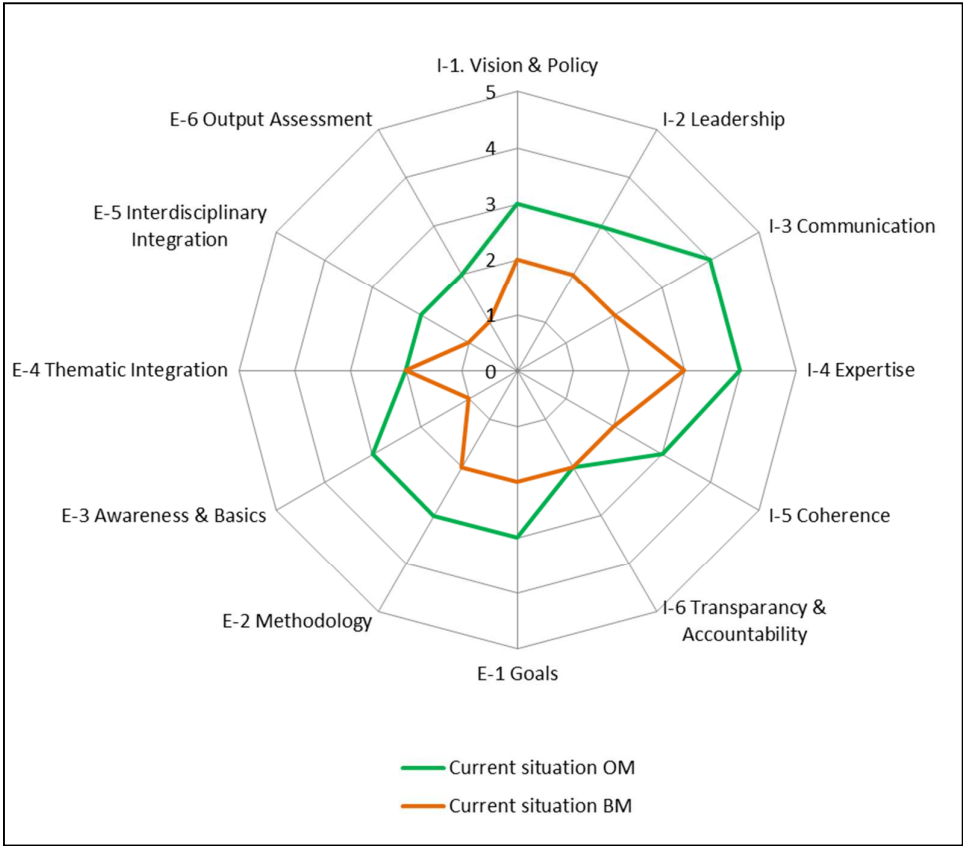


Figure 8. Differences in results between Office Management (OM) and Business Management (BM)



### ***Results regarding the organisational change trajectory for SD***

The assessments have led to some remarkable outcomes. Most criteria were assessed as being at the same stage as the previous assessment in 2010. This leads to the assumption that there has been a status quo regarding the situation in 2010. In reality, the situation is much more complex: different structural initiatives have been undertaken between 2010 and 2015. However, these are not always visible to individual staff members of the organisation, and therefore are not taken into account to their full potential in the assessments. A first example is the calculation of the Ecological Footprint of the organisation in 2012, followed by a structural integration of sustainability criteria in the general campus operations (Lambrechts and Van Liedekerke, 2014). The assessment pointed out that individual staff members were not aware of this initiative. A second example is the professional development initiatives undertaken by the department, with the objective to increase awareness among staff and to encourage the integration of SD in education and research (Rymenams and Lambrechts, 2014). Although every member of staff had participated in these initiatives, the participants did not include them in the discussion during the assessments.

Nevertheless, the outcomes of the assessments show that SD is structurally embedded in the organisation and is accepted by its staff. Without any exception, all participants believed that it was important to keep on focusing on the SD integration, e.g. by renewing the vision and policy criteria. Also, future SD initiatives need to highlight collaboration with students and external stakeholders. Regarding the SD integration in education and research, more focus is needed on multi-, inter- and transdisciplinarity. Participants believed that there were a lot of possibilities already available in the study programs, without being explicitly connected to sustainability initiatives.

### ***Results regarding the practical use of AISHE 2.0***

The application of AISHE 2.0, in a total of 7 sessions, has led to a number of practical constraints regarding the assessment process. First, as sustainability and SD are very fuzzy concepts, a lot of discussion remained regarding their conceptual interpretation. A lot of time was spent during each session on the definition of SD and how it could or should be interpreted. Undoubtedly, it is very useful to have this kind of discussion, but it sometimes influenced the assessment, as participants could come to a consensus regarding certain criteria. A second constraint is that a number of initiatives undertaken in the study programmes, were not valued in the assessments, due to the fact that participants were not aware of them. This puts a strong emphasis on the visibility of and communication about SD initiatives, which might bias results. Too much focus on visibility, also comprises a risk of green-washing ('if we say we do it, people believe it').

A third constraint is that the assessments are very time-consuming. It takes a lot of preparation time for the people organising it, and a lot of time of the participants. Also, the time spent on organising the assessments was, in this case, funded by an external funding organisation, which allowed to organise all 7 sessions. Without this external funding, we doubt that it would be possible to organise it this way. This also leads to the question of how to assure that the results of the assessments will be followed up afterwards. After each session, participants go 'back-to-business-as-usual', as they have their regular daily tasks to do.

A final comment on the use of AISHE 2.0 is that all sessions showed that participants were very positive regarding the process and outcomes of the discussion. They claimed to be more aware of the topic

and of the initiatives after the session. This illustrates the importance of the process of the assessment which, regardless of the results, lead to growing awareness among participants.

## **Discussion**

It is possible to connect the results of the AISHE 2.0 assessments to the analysis of the first version of AISHE. According to Lambrechts and Ceulemans (2013), the strengths of the first version of AISHE are the process-oriented approach, the raise in awareness among participants and the connection of bottom-up and top-down initiatives. Weaknesses of the instrument were the focus on educational aspects, omitting the other key roles of a HEI, and the focus on mere qualitative criteria. It is clear that the major strengths have been retained in the new version, such as the process-oriented approach and the possibility to raise awareness among staff.

Furthermore, with the development of a modular system, all key roles are now included in the instrument. This is especially interesting for other stakeholders, mainly involved in research outreach activities, policy development or campus operations. The results of an assessment focusing on the module 'Identity' could provide more concrete input for policy development than the first version of the instrument (see on this issue: Lambrechts, 2015). However, adding more modules to the instrument also means that the process of doing an assessment becomes more time-consuming and complex. More staff has to be involved in order to perform the assessment, which is not always easy to organise.

The modular system is developed from a holistic perspective, in which a HEI is seen as a key player in society. However, the modules have to be assessed in separate sessions, with separate participants. This prevents a true holistic approach in the organisation, which is a major constraint of the new version. Nevertheless, connecting the modules could be a possibility, although it requires guidance by a coordinator of the assessment, thus keeping track of the holistic view.

## **Conclusion**

This paper aimed to analyse the application of AISHE 2.0 in a single HEI, and to compare the results with the first version of the instrument. The results show that the major strengths of the first version have been retained in the new version. Some weaknesses do remain, e.g. the excessive focus on communication aspects. It is difficult to find a balance regarding communication issues. On the one hand, integrating initiatives in current processes without explicit communication poses the risk of staying under the radar in an assessment. On the other hand, too much communication might lead to overexposure and green-washing effects. The objective should always be to communicate in a correct and objective manner, thus improving visibility for and involvement of stakeholders.

New weaknesses also appear, namely the missed opportunity of a holistic approach and the time constraints. The first version of AISHE provided the possibility to be rewarded with an official certificate, while AISHE 2.0 does not (yet) have this possibility. This might be regarded as a missed opportunity, in particular for policy members and external communication. However, it should be stated that paying considerable and constant attention to the SD integration process is of utmost importance, rather than focusing on static and intermediate results, stars or certificates.

As with the first version of AISHE, the new version AISHE 2.0 excels in its process-oriented approach, enabling participants to discuss the topic in a systematic way. This process is especially important in

an SD integration process. The case in this paper showed that, although a HEI might have gone through an integration process of many years, new(er) staff members might not be familiar with this process, thus assessing the situation in a different way. This might bias the results of an assessment in some way, and lead to the impression that the integration process is 'failing'. What is important here is the attention towards the further integration process, and the way new staff members are introduced to the topic.

AISHE provides a useful frame for discussion and awareness-raising among staff. However, it is not the only possibility to start such a process. Many other instruments are available and could be more interesting according to the local context of a HEI or study program (for a selection of other sustainability assessment tools, see e.g. Caeiro et al., 2013; Shriberg, 2004). An approach or instrument that is very useful in one organisation, might not work for another. That is why this paper is not a recommendation for the use of AISHE or AISHE 2.0, but rather calling to start a process of SD integration, with a possibility to discuss or assess the current situation of SD integration, in which the HEI is free to choose the instrument or approach which suits its context best.

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